

A new species of the genus *Trilochana* Moore, 1879 (Lepidoptera, Sesiidae) from Sulawesi

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Abstract *Trilochana nagaii* sp. nov. is described from Sulawesi, Indonesia. The genus *Trilochana* is briefly reviewed. *Trilochana phaedrostoma* Meyrick, 1934 is transferred to *Synanthesdon* Hübner, 1819 (**comb. nov.**).

Key words Sesiidae, Sesiini, *Trilochana*, new species, new combination, Sulawesi, taxonomy.

Introduction

The genus *Trilochana* Moore, 1879 (type species *Trilochana scolioides* Moore, 1879) comprises large clearwing moths with almost completely black opaque wings with strong metallic luster. The genus which shows an Oriental distribution was revised and placed in the tribe Sesiini (Sesiinae) by Gorbunov & Arita (1995). Since then another species from the Philippines was described (Kallies & Arita, 1998) and the genus was recorded from Australia for the first time (Kallies, 2001).

Here we describe another brilliant *Trilochana* species from the island of Sulawesi, Indonesia. This is the first record of *Trilochana* for this island closing a gap in the previously known range of the genus.

The specimens examined in this work are kept in the following collections abbreviated in the text as follows:

CAK—Collection Axel Kallies, Berlin, Germany.

ZMUN—Zoological Laboratory, Faculty of Agriculture, Meijo University, Nagoya, Japan.

Trilochana nagaii sp. nov. (Figs 1–2)

Description. Male (Fig. 1). Alar expanse 54 mm, forewing length 24 mm, body length 30 mm, antenna 15 mm.

Head: black; antenna black, very long (reaching well beyond the discal spot of forewing), bipectinate, each pecten short ciliate; labial palps black; frons white laterally. Thorax: black.

Legs: black; some white scales at base of hind coxa; hind tibia with individual white scales basally, close to the proximal pair of tibial spurs, dorsally with tufts of white scales in the middle and at distal end; hind tarsus with some white medially. Abdomen: black. Forewing: blackish with a strong metallic violet shine; with a small transparent area between stems of radial and cubital veins; ventral side of the

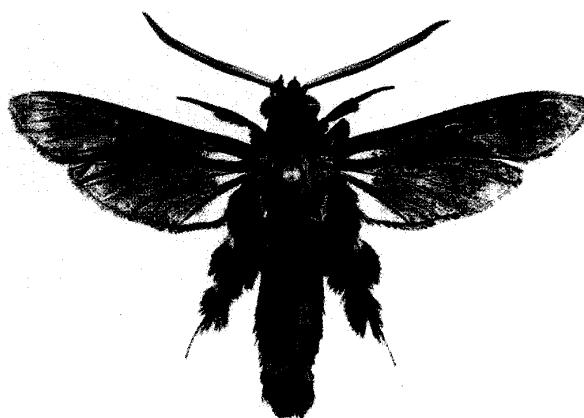


Fig. 1. *Trilochana nagaii* sp. nov., ♂, paratype.

same color. Hindwing: of same color as forewing; with a small transparent area in cell between base of cubital stem and base of A_1 ; cell between A_2 - A_3 transparent throughout; ventral side of the same color.

Male genitalia (genitalia preparation No. 1734 YA). Uncus well-developed, with thin hair-like setae; gnathos shovel-like, somewhat asymmetrical, apically bilobed; valva quadrangular, with long, strong setae along ventral and distal margins, an additional field of conspicuously strong setae in middle part; aedeagus relatively long, with a narrow sclerotized plate apically, vesica with numerous spinules; saccus short and narrow.

Variability. Alar expanse range from 50 to 60 mm, otherwise not variable.

Diagnosis. *T. nagaii* sp. nov. differs from all species of the genus *Trilochana* by the strong violet shine of the wings. The conformation of the genitalia, the morphology of the head and the antenna, the absence of yellow scales and the type of scaling of the wings indicate a close relation of *T. nagaii* and *T. smaragdina*. The latter can be separated from the new species by the coloration and the conformation of the transparent areas of the wings: with a strong greenish lusture; hindwing with a small transparent area in cell between media and cubital stem. Further, *T. smaragdina* differs by a row of white scales between head and fore coxa, by the smaller size (alar expanse 37-47 mm) and in details of the male genitalia morphology (apex of valva less pronounced; saccus smaller; uncus longer, aedeagus shorter). From *T. scoloides*, *T. oberthueri*, *T. chalciptera*, and *T. triscoliopsis* the new species differs by the longer antennae (not reaching the discal spot of the forewing in the species compared); by the smaller head (broader, about as broad as the thorax in the species compared); by the white bordered frons (black in the species compared); by the type of scaling of wings (coarse in *T. nagaii*, fine in the species compared), and by consistent absence of yellow to orange-red markings on the abdomen or thorax (frequently present in the species compared).

Distribution. This species is known from South and Central Sulawesi (Indonesia).

Bionomics. *Trilochana nagaii* sp. nov. occurs in tropical forests in lowland up to an

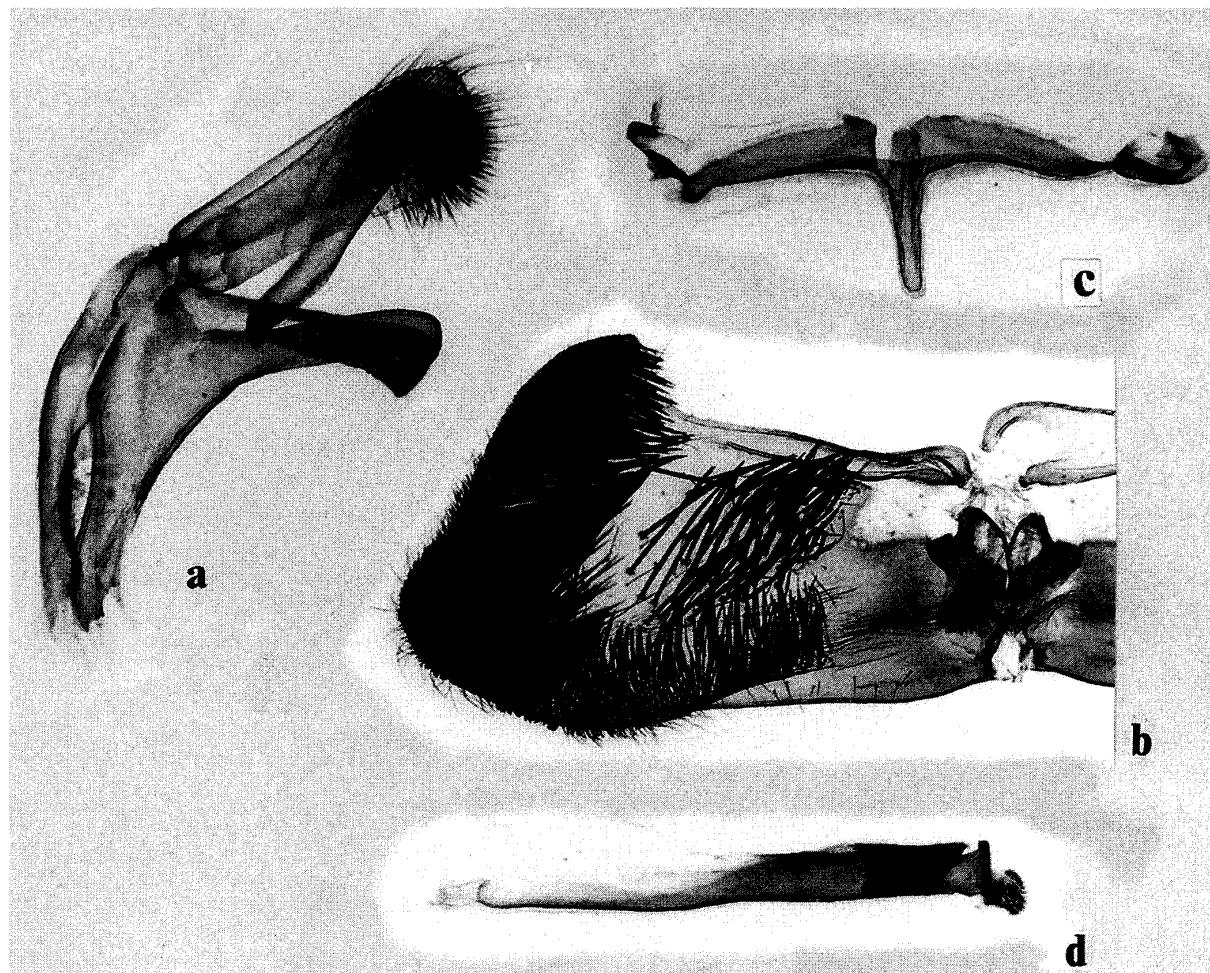


Fig. 2. Male genitalia of *Trilochana nagaii* sp. nov., paratype (genitalia preparation No. 1734 YA). a. Tegumen-uncus complex. b. Valva. c. Saccus. d. Aedeagus.

altitude of 1,000 m. It was collected at pheromone lures predominately in August, one specimen in January.

Material. Holotype. ♂, [Indonesia] Sulawesi Seltan (South Celebes I.), Maros, Bantimurung, alt. ca 50 m, 11. VIII. 1998, S. Nagai legit (ZMUN). Paratypes. 3 ♂, same labels as holotype; 1 ♂, same locality and collector, 13. VIII. 1998; 1 ♂, Sulawesi Seltan (South Celebes I.), Barru, Mt Buldua, alt. ca 1,000 m, 10. VIII. 1998, S. Nagai legit (genitalia preparation No. 1733 YA); 1 ♂, Sulawesi Seltan (South Celebes I.), Maros, Lenbang, alt. ca 1,000 m, 12. VIII. 1998, S. Nagai legit; 2 ♂, Sulawesi Seltan (South Celebes I.), Maros, Leang Pattang, Pangia, alt. ca 300 m, 14-16. VIII. 1998, S. Nagai legit (genitalia preparation No. 1734 YA); 1 ♂, Sulawesi Seltan (South Celebes I.), Poso, Lenbomawo, alt. ca 150 m, 21-22. VIII. 1998, S. Nagai legit; 1 ♂, Indonesia (South of South Sulawesi), Maros, Banting Murang, alt. ca 50 m, 4. I. 2000, S. Nagai legit (all in ZMUN); 1 ♂, Sulawesi Tengah (Central Celebes I.), Poso, Lembomawo, alt. ca 150 m, 21-22. VIII. 1998, S. Nagai legit (CAK).

Remarks. With the recent additions, the genus *Trilochana* includes nine species ranging from Nepal in the west to northern Australia in the east: *Trilochana scolioides* Moore, 1879 (the type species), *T. insignis* (Butler, 1885), *T. oberthueri* Le Cerf, 1917,

T. chalciptera Hampson, 1919 [probably a junior synonym of *T. insignis* ab. *pseudoinsignis* (Strand, 1917)], *T. triscoliopsis* Rothschild, 1925, *T. smaragdina* Diakonoff, 1954, *T. caseariae* Yang & Wang, 1989 [probably a junior synonym of *T. scoloides* Moore, 1879], *T. illustris* Kallies & Arita, 1998, and *T. nagaii* Arita & Kallies sp. nov.

Examination of another species, *Trilochana phaedrostoma* Meyrick, 1934 from Tanganyika (Tanzania) showed that it has evidently been misplaced. This species is hereby transferred to the tribe *Synanthedonini* and provisionally placed in the genus *Synanthedon* Hübner, 1819 (**comb. nov.**).

References

Gorbunov, O. & Y. Arita, 1995. A revision of Federic Moore's clearwing moth types (Lepidoptera, Sesiidae), at Humboldt University, Berlin. *Tinea* **14**: 204-224.

Kallies, A. & Y. Arita, 1998. New and little known clearwing moths (Lepidoptera, Sesiidae) from the Philippine Islands. *Trans. lepid. Soc. Japan* **49**: 245-270.

Kallies, A., 2001. New records and a revised checklist of the Australian clearwing moths (Lepidoptera, Sesiidae). *Aust. J. Ent.* **40**: 342-348.

摘要

スラウェシ島産 *Trilochana* 属 (鱗翅目, スカシバガ科) の 1 新種 (有田 豊・Axel Kallies)

南アジア産の大型のツチバチ (Scoliidae) に擬態するスカシバガ科の *Trilochana* 属は東洋区から 8 種とオーストラリア区から 1 種が知られている。今回スラウェシ島で得られた *Trilochana* 属の種は調査の結果新種と認められたので記載した。

Trilochana nagaii sp. n. (Figs 1-2)

本種は前後翅が紫色に強く輝くことや胸部や腹部に橙黄色や黄色の斑紋がないことで容易に他の種類と区別される。

Trilochana 属の種はスラウェシ島からは今まで記録がなく、この種が最初の記録になる。ホロタイプ、パラタイプとともに合成性フェロモンに飛来したが性フェロンは特定されていない。種名はスラウェシ島で本種を採集された永井信二氏に献名した。

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